Honeywell

AVBPITPOS

Serial Port Point-of-Sale Filtering Module

Installation Manual

KEMU000826 – 03/04 – Rev B

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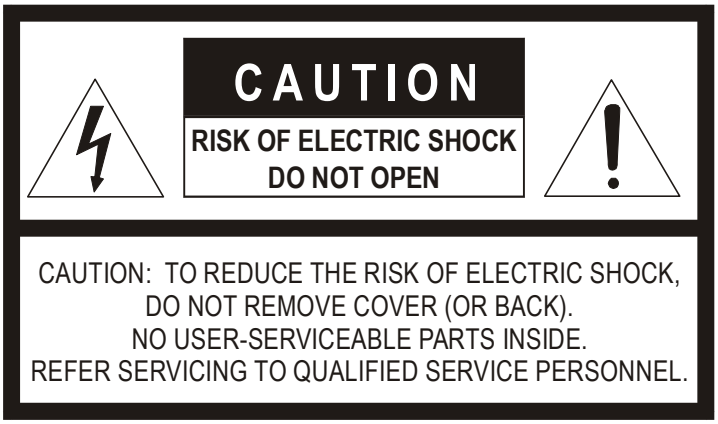
EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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SECTION 1:
INTRODUCTION

1.1 PRODUCT DESCRIPTION

Honeywell offers the technology for a truly integrated video and data capture system. The combination of the Protocol Interface Translator (PIT) and the Rapid Eye system provides this integrated capability. AVBPITPOS is a transparent serial device that can capture the serial data from a Point-of-Sale (POS) device and send it to the Rapid Eye system for viewing, recording, and searching.

AVBPITPOS is a single serial port POS filtering module that will allow a POS device to communicate with the Rapid Eye Remote Unit through a single data communication port on the Remote Unit.

1.2 PACKAGE CONTENTS

The AVBPITPOS kit consists of the following components:

1. AVBPIT1 – Serial Port POS filtering module
2. DKT507ND – 12VDC Power Supply with 2.1mm female connector
3. 921400-05 – Cable, Serial File Transfer DB9

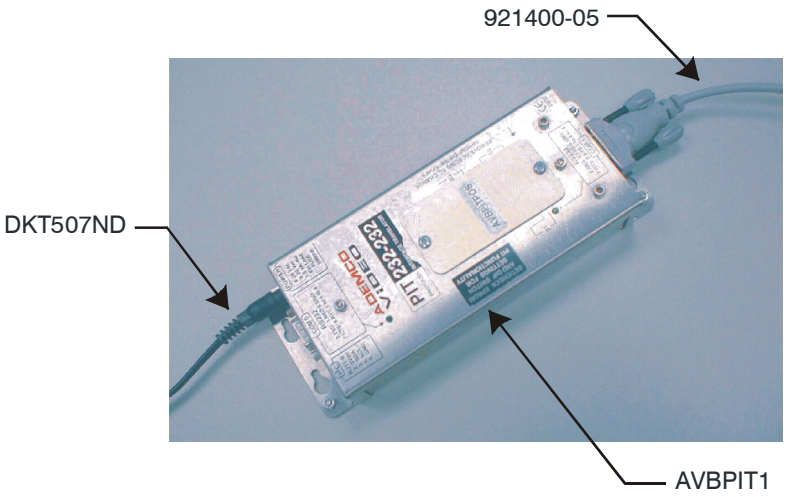


Figure 1: AVBPITPOS Kit

SECTION 2:
CONTROLS AND CONNECTIONS

2.1 POS WITH A SINGLE COM PORT

If the POS system has **a single serial port** and it is already being utilized for printing, a cable must be manufactured to connect a POS device to the AVBPIT1. This new cable will allow the POS system to share Transmit (TX) and Signal Ground (SG) between the AVBPIT1 and the existing printer.

The new cable can be completely remanufactured or made simply by splicing into the existing cable and connecting Pins 2 and 5 (typically) of the POS serial port with pins 3 and 5 of the AVBPIT1. See the Figure below. For a typical system diagram, see Appendix A, Figure 6.

Be careful to comply with all applicable RS232 standards when creating this new cable. Although the Rapid Eye and PIT system only require 2 signals to effectively capture POS data, the serial ports on the POS terminals may require other RS232 signals be addressed to operate effectively. Some POS terminals require that the RTS and CTS signals be connected together before the port will transmit data. Consult your POS hardware manual for any POS-specific requirements.

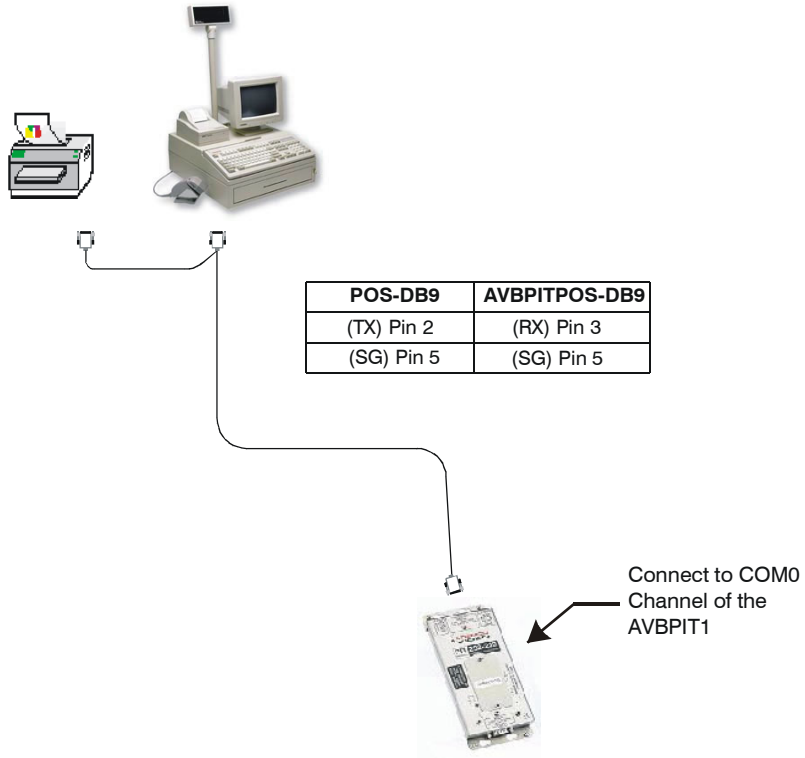


Figure 2: New Cable – POS with a Single COM Port

2.2 POS WITH MULTIPLE COM PORTS

If the POS system has more than one **serial port,** it is preferable to enable this second port in **Journal Mode** and capture its output by connecting it directly to the AVBPIT1 COM0 Channel. The cable utilized here must also be manufactured and is pinned out similar to the one described in Section 2.1 above, except that it directly connects the POS device and the AVBPIT1 module. The cable must connect Pins 2 and 5 (typically) of the POS serial port with pins 3 and 5 of the AVBPIT. See the figure below. For a typical system diagram, see Appendix A, Figure 7.

Be careful to comply with all applicable RS232 standards when creating this new cable. Although the Rapid Eye and PIT system only require 2 signals to effectively capture POS data, the serial ports on the POS terminals may require other RS232 signals be addressed to operate effectively. Some POS terminals require that the RTS and CTS signals be connected together before the port will transmit data. Consult your POS hardware manual for any POS-specific requirements.

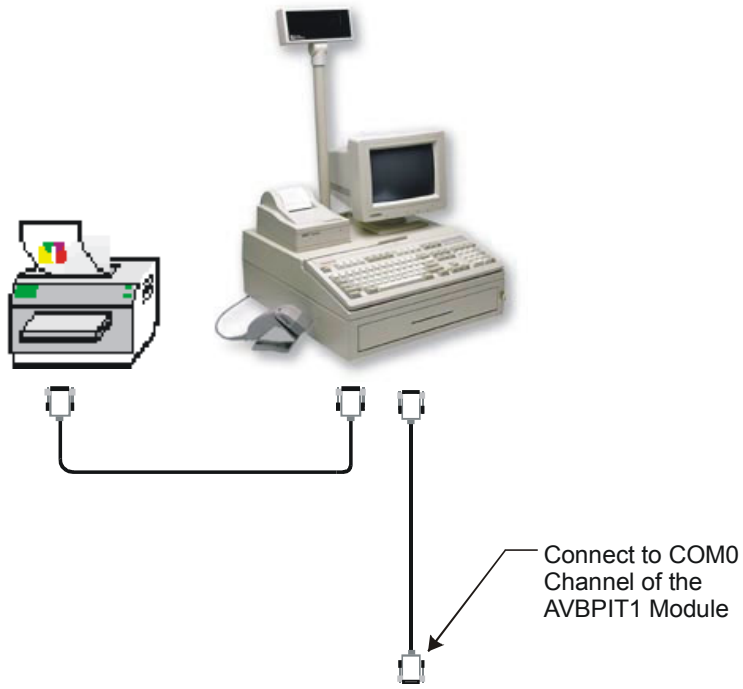


Figure 3: New Cable – POS with Multiple COM Ports

SECTION 3:
CONFIGURING THE AVBPITPOS

3.1 DIP SWITCHES

The AVBPIT1 is designed to interface different POS devices with the Rapid Eye system. The POS device and its related serial communication parameters are selected using three banks of DIP switches (**S1**, **S2** and **S3)**, which are found under the removable lid.

Access the DIP switches by removing the lid as shown in **Figure 4**.

1. Unscrew the 2 screws used to secure the lid to the AVBPIT1 housing.

2. Retain the screws for use when replacing the lid later in the installation procedure.

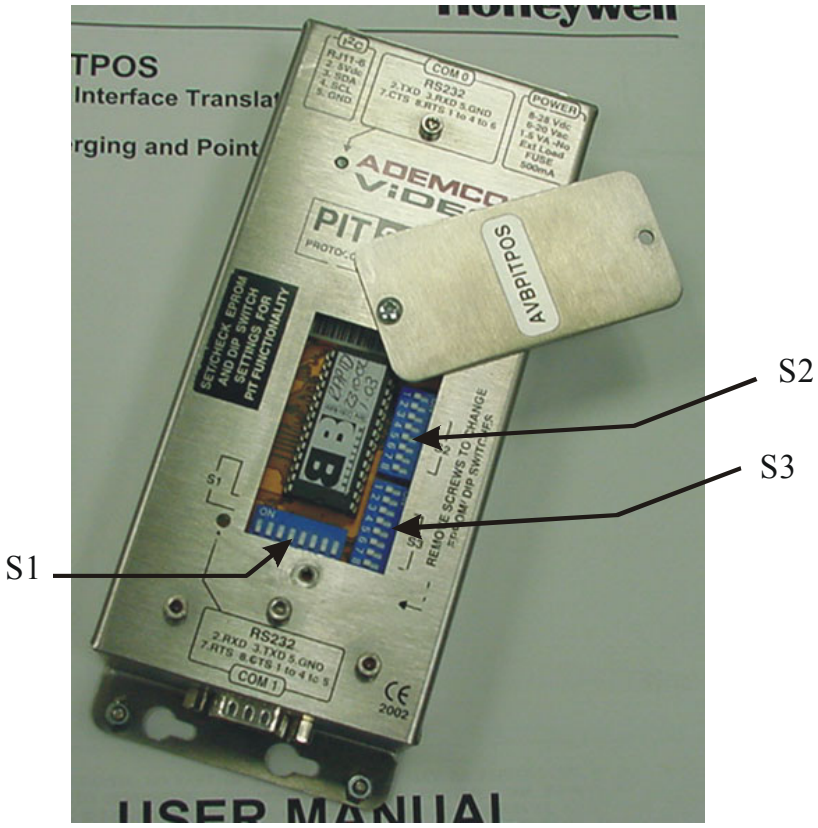


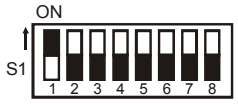
Figure 4: Accessing DIP Switches

3.1 DIP SWITCHES, CONTINUED

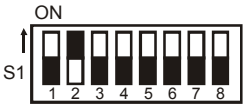
3.1.1 DIP SWITCH S1

Use the **S1** bank of DIP switches to select different operational modes for the AVBPIT1.

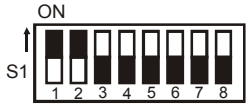
Note: The dark area represents the desired setting of each individual switch within the DIP switch.



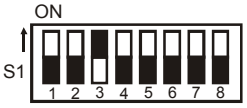
Radiant Mode



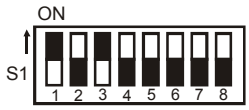
Verifone Mode



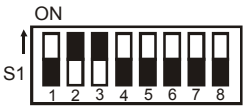
Retalix Mode



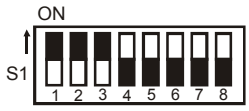
Wayne Mode



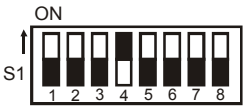
Javelin Mode



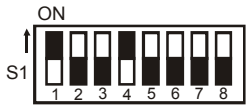
Hex Mode



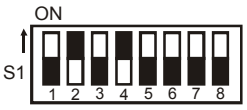
Sharp Mode



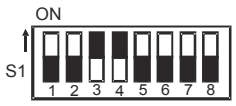
Panasonic 5500 Mode



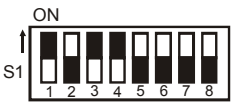
PAR ¾ Generic Mode



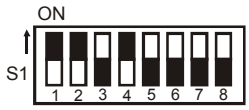
NCR 7454 Mode



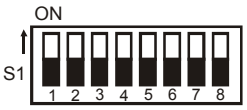
NCR 7454-3201-M403 Mode



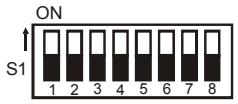
NCR Model 1000 Mode



Radiant M100 Mode



Gilbarco G-SITE® Mode

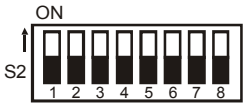


Diagnostic Mode (All Switches OFF)

Diagnostic Mode can also be used to pass unfiltered or generic ASCII data to the Rapid Eye system.

3.1.2 DIP SWITCH S2

The **S2** bank of DIP switches are preset and all should remain in the **OFF** position.

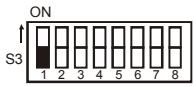
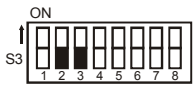
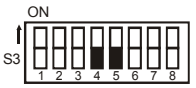
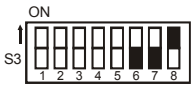
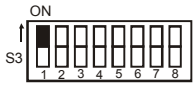
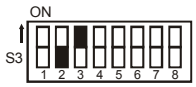
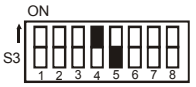
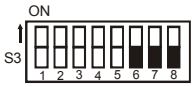
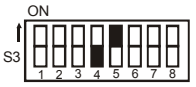
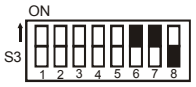
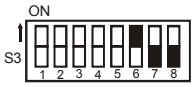
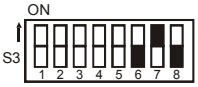


3.1 DIP SWITCHES, CONTINUED

3.1.3 DIP SWITCH S3

Consult your POS programming manual for baud rate and other serial port configuration parameters

Use the **S3** bank of DIP switches to change communication settings if they need to differ from the default settings of **9600, 8, N, 1** (All Switches off). This will configure the COM0 Channel of the AVBPIT1 module to match the **printer** or **journal** port settings required by the POS device. RS232 parameters such as Stop Bits, Data Bits, Parity, and Baud Rate can be individually configured as shown below.

Stop Bit		Data Bits		Parity		Baud Rate	
Switch 1	Stop Bits	Switches 2 and 3	Data Bits	Switches 4 and 5	Parity	Switches 6, 7, and 8	Baud Rate
	1		8		None		19200
	2		7		Even		9600
					Odd		2400
							4800
							1200

NOTE: The setting 7 (Data Bits), N (No Parity), 1 (Stop Bit) is not supported for all baud rates.

3.2 CONNECTING THE AVBPITPOS TO THE RAPID EYE REMOTE UNIT

Connect COM1 Channel of the AVBPIT1 module to the Rapid Eye Remote Unit, COM port 1 using the cable (**921400-05**) included in the kit.

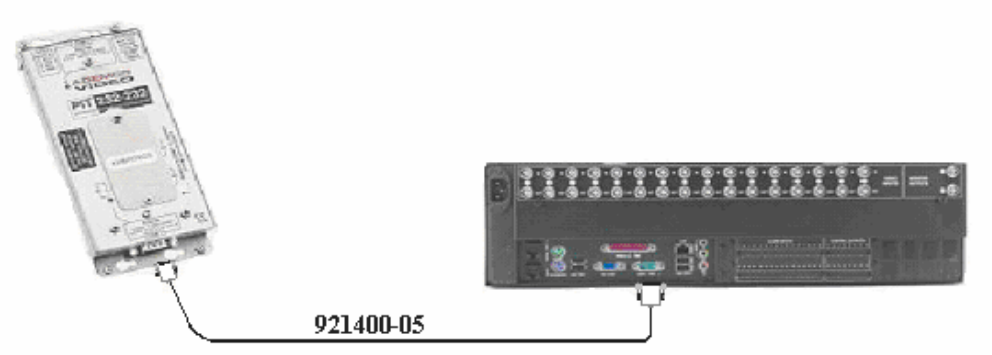


Figure 5: Connecting AVBPIT1 to Rapid Eye

3.3 SETTING UP GILBARCO G-SITE®

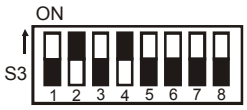
When setting up Gilbarco G-SITE®, follow these steps:

1. Leave **S1** in the Debug mode (all switches OFF).

2. Set the Register output to a Citizen Printer (Printer not required.)

3. Set the Register Baud Rate to 9600.

4. Set **S3** to Baud Rate = 9600
   Data Bits = 7
   Stop Bit = 1
   Parity = Even

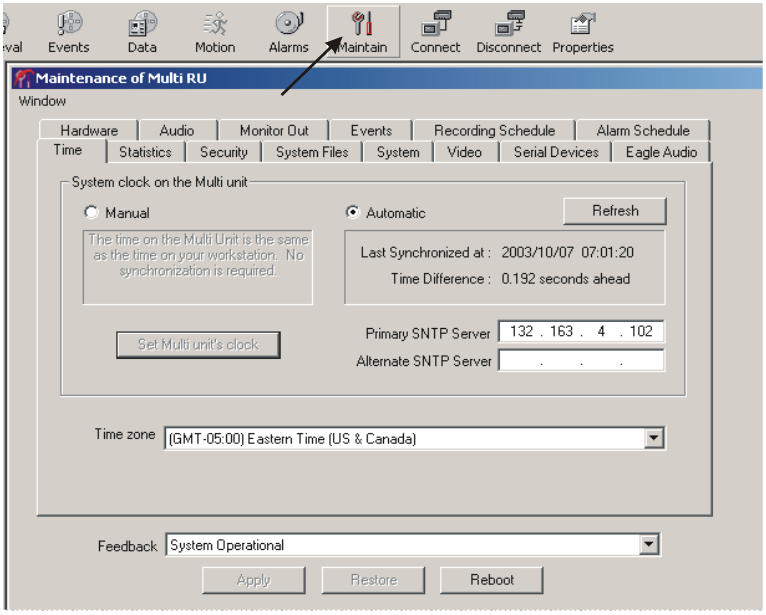


SECTION 4:
SOFTWARE SETUP

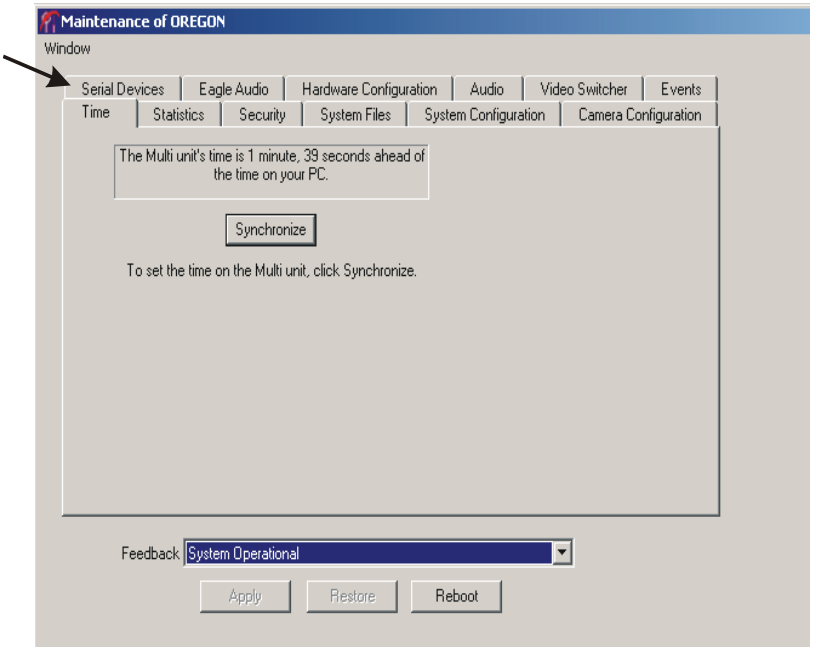
4.1 SETTING UP RAPID EYE SOFTWARE

1. Start the Rapid Eye Multi VIEW program and connect to the Remote Unit.

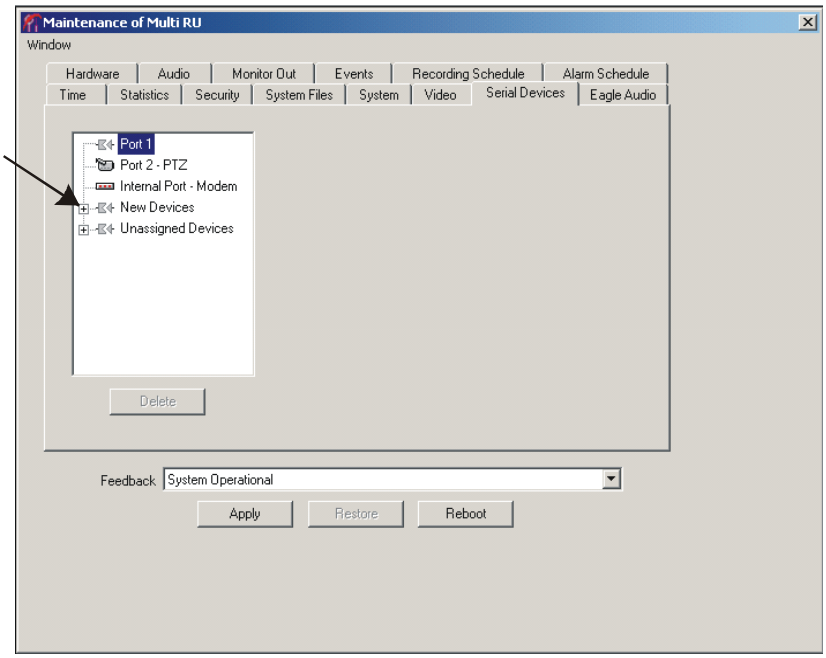
2. Select **Maintain** from the top menu bar.



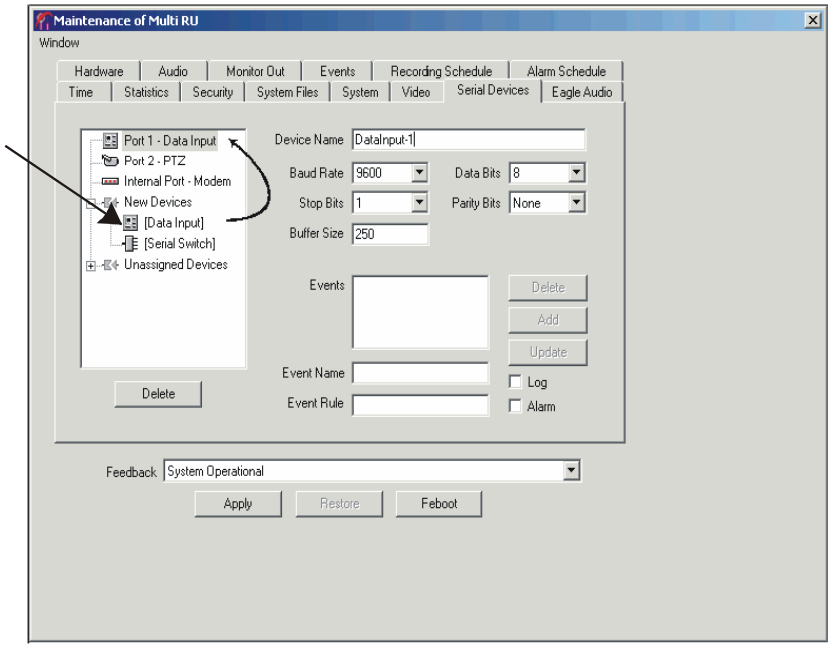
3. Select the **Serial Devices** tab from the Maintenance window.



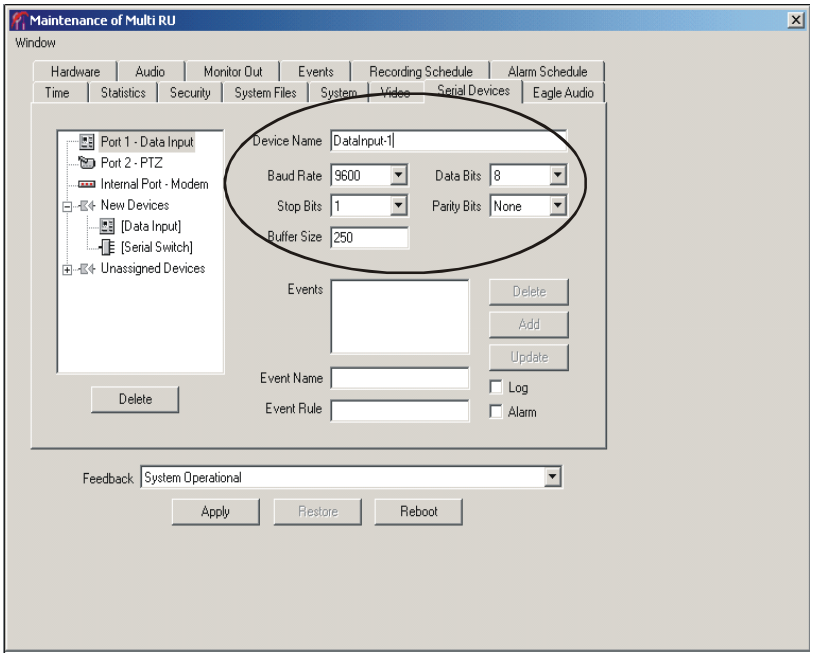
4. Expand the **New Devices** section by clicking on the [+].



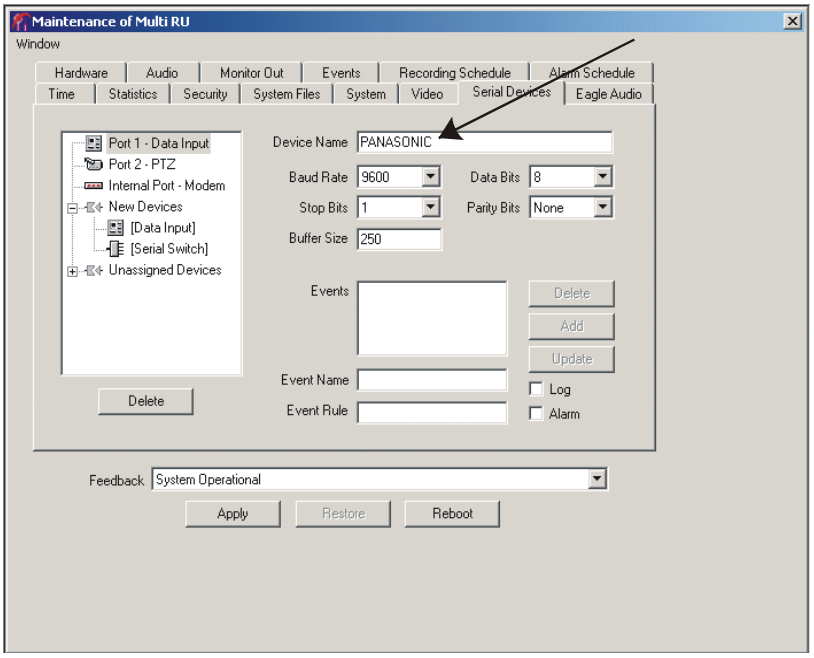
5. Select **Data Input** from **New Devices** and Drag and Drop onto **Port 1.**



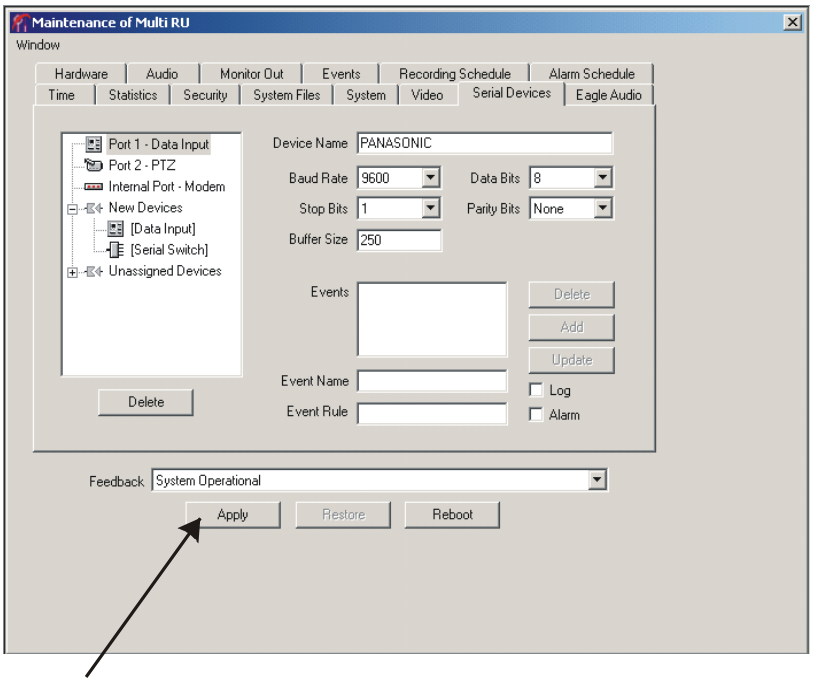
6. Configure **Port 1 – Data Input** at:
Baud Rate = 9600; **Data Bits** = 8; **Stop Bits** =1, **Parity Bits** = None



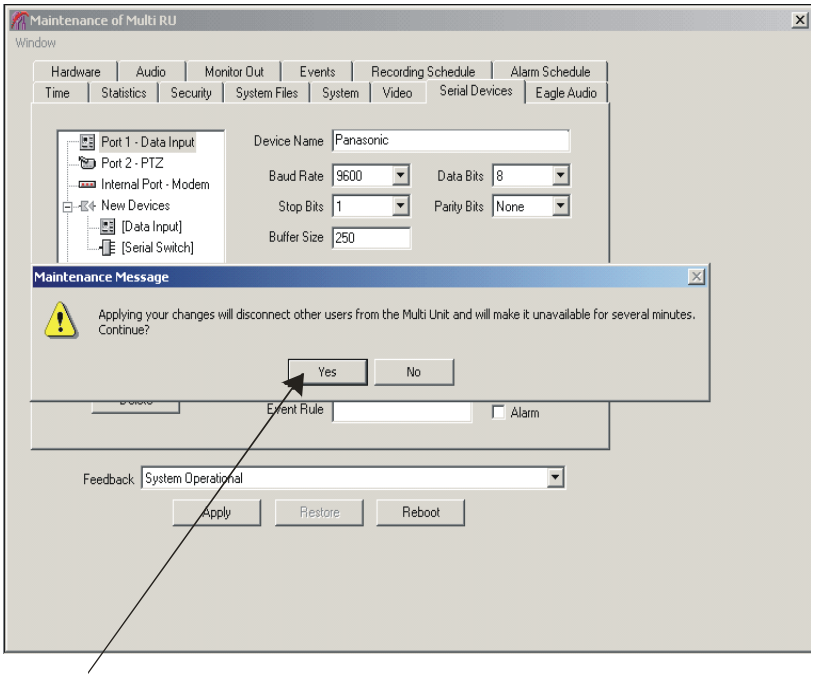
7. You can further customize the configuration by giving the **Data Input** a unique name, click in the **Device Name** field and enter a name for the POS device.



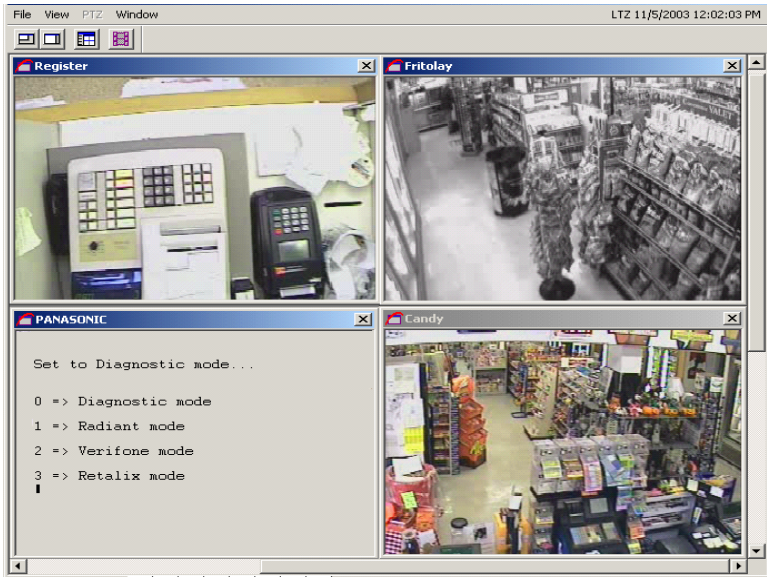
8. Once the device is configured, select **Apply.**



9. Select **Yes** in response to the **Maintenance Message** and wait for the **System Operational** message to appear in the **Feedback** dialogue box.

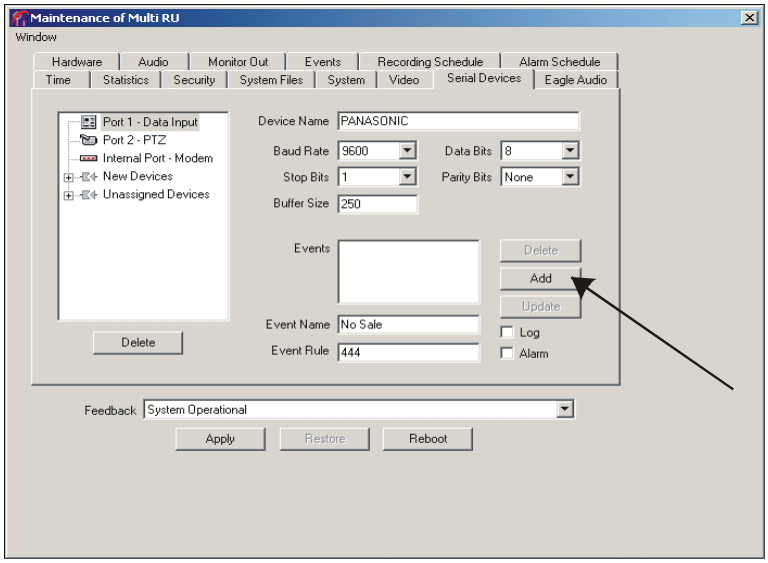


10. After **System Operational** feedback is received, test the communication between the AVBPITPOS and Rapid Eye by toggling DIP switch (S1) position 8 **ON** and **OFF.** Data window should display similar result as shown in the Panasonic window below.

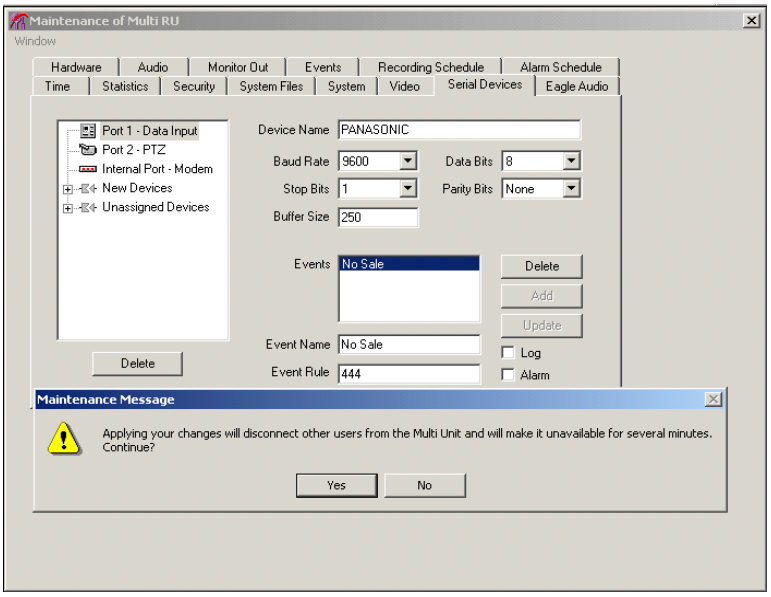


11. You can further customize the configuration by setting up the Rules to create **Log** and **Alarm** events based on the data being captured by the Rapid Eye system. If **Rules** are not required, skip to Step 14.

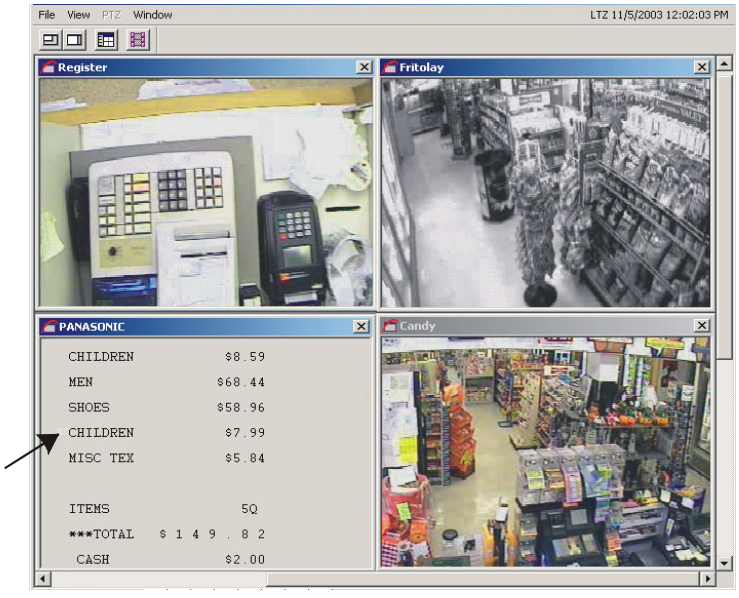
12. Create rules for data events by entering the appropriate information in the **Event Name** and **Event Rule** dialogue boxes then clicking the **Add** button. The **Event Name** will appear in the **Events** window. Consult Rapid Eye's VIEW user Guide for more information about this capability.



13. Once the rules are configured, select **Apply** then **Yes** in response to the **Maintenance Message**. Wait for the **System Operational** message to appear in the **Feedback** dialogue box. (Same procedure as described in steps 8 - 9).



14. From VIEW, initiate a Live session to the Remote Unit and verify that installation and setup are correct and that a separate data window is available for the POS device. Initiate a Live session to the Remote Unit. A data stream will appear and can be selected in the same manner as any other available video stream. All streams will be selected by default; this will be the same for Live or Retrieval sessions. Verify that the POS device is communicating with the Rapid Eye system by initiating a transaction at the POS device and verifying that the correct data appears in the Data Input window.

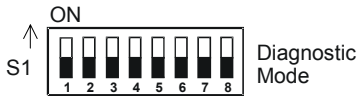


15. Once installation and setup are complete and verified, replace and secure the lid to the AVBPIT1 module using the screws removed in Section 3.1. The AVBPITPOS installation is now complete.

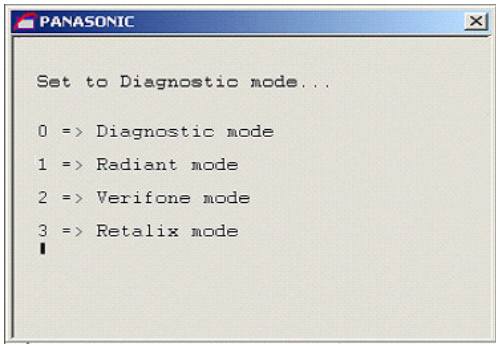
SECTION 5:
TROUBLESHOOTING

5.1 DIAGNOSTIC MODE

Enter the **Diagnostic Mode** by setting all **S1** DIP switches to the OFF position and cycling the power of the AVBPIT1 module



Rapid Eye will display a message in the **Data Input** window similar to that shown below. Diagnostic Mode can also be used to pass unfiltered or generic ASCII data to the Rapid Eye system.



5.2 INDICATORS

Green LED on the COM0 Channel flashes	Data is being transmitted by the POS device and being received at the AVBPIT1 COM0 Channel.
Yellow LED on the COM1 Channel flashes	Data is being transmitted to the Rapid Eye.
Printer won't print when PIT is connected	For single COM port POS installations check if there is signal on Pin 3 of the cable connected to printer. Pin 3 is the transmit data pin and a signal here will halt printing.

APPENDIX A:
SYSTEM DIAGRAMS

A.1 CONNECTING A POS SYSTEM WITH A SINGLE COM PORT

See the figure below for a typical system diagram when connecting a POS device with a single COM port which will be shared between the printer and the AVBPIT1 module.

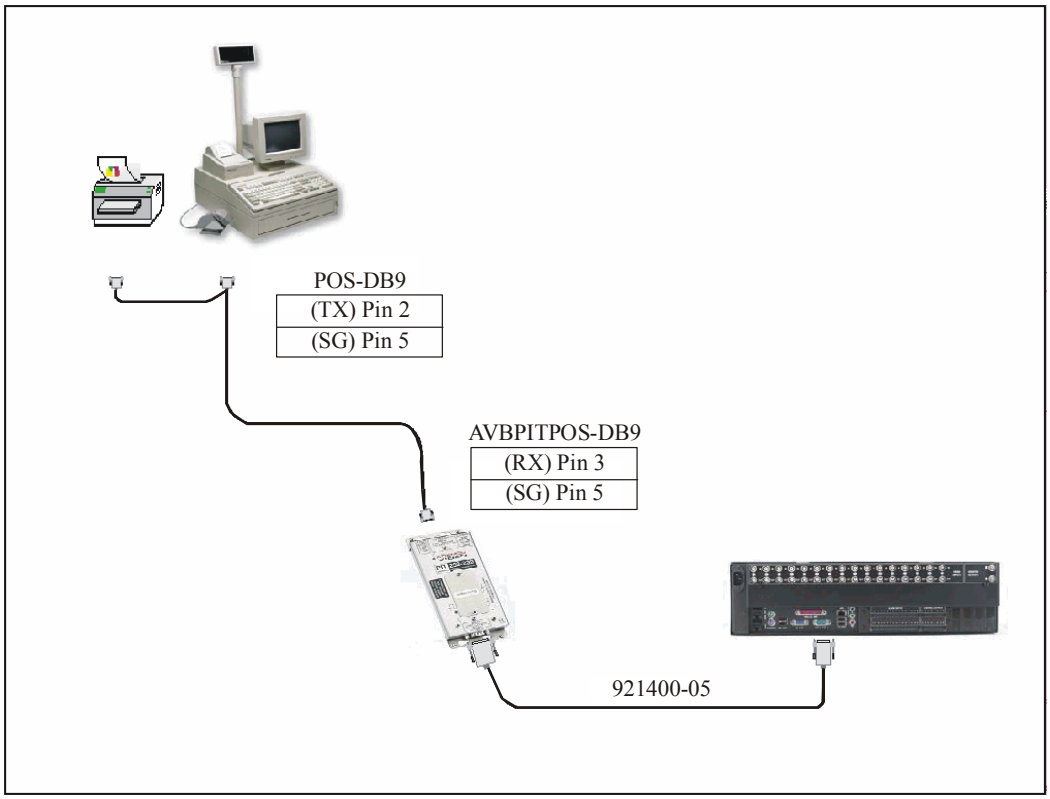


Figure 6: Connecting a POS device with a single COM port to the AVBPITPOS

A.2 CONNECTING A POS SYSTEM WITH A SEPARATE COM PORT FOR PRINTER

See the figure below for connecting a POS device with multiple COM ports enabled to the AVBPIT1 module.

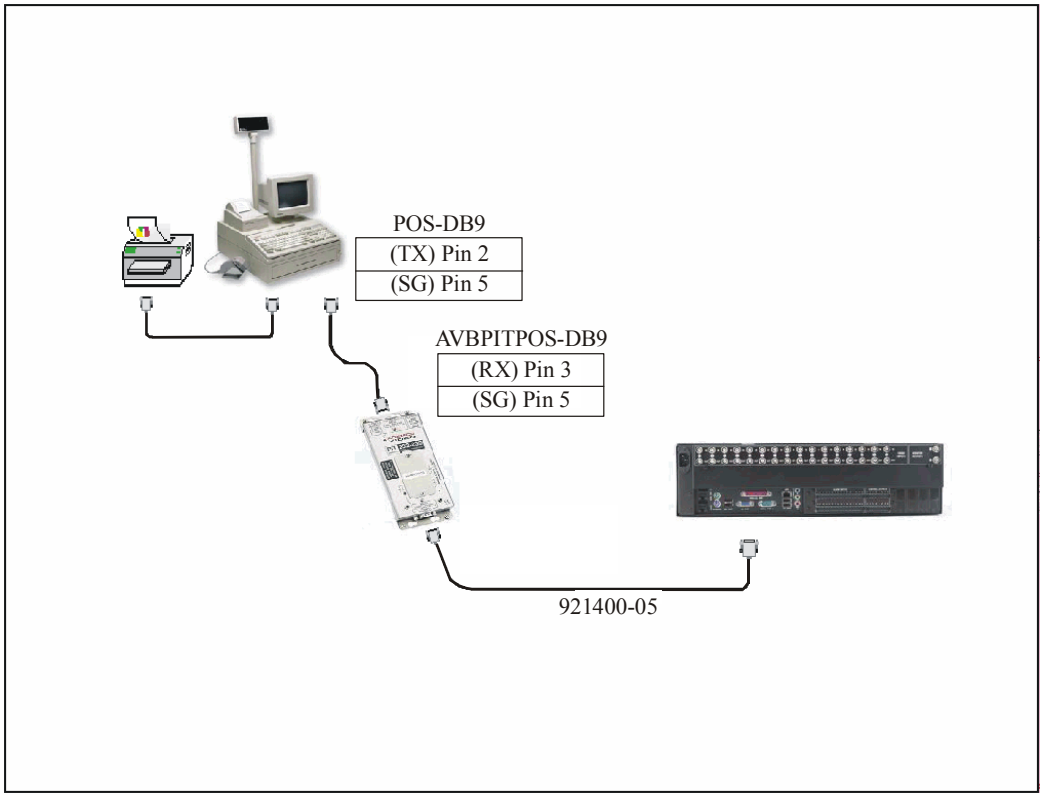


Figure 7: Connecting a POS device with multiple COM ports to the AVBPITPOS

APPENDIX B:
SYSTEM DIAGRAM USING B&B SMART SWITCH

B.1 CONNECTING A POS SYSTEM USING B&B SMART SWITCH AND 4 AVBPITPOS MODULES

This appendix is provided to document early uses of the AVBPITPOS in a multiple POS device configuration. By combining a B&B Smart Switch and 4 AVBPITPOS devices, it was possible to develop a multiple POS device system. The figure below depicts this basic system configuration attached to a Rapid Eye Multi Remote Unit. For more detailed information regarding this type of POS implementation visit our web site and download Application Note AVAN000851 (Configuring a B&B Electronics Smart Switch (232BSS4) for use with the Rapid Eye Multi and the AVBPITPOS Filtering Module).

NOTE: When deploying a new multiple POS device systems we recommend using the AVBPIT4POS device instead of the B&B Smart Switch and multiple AVBPITPOS devices, consult the web site for details.

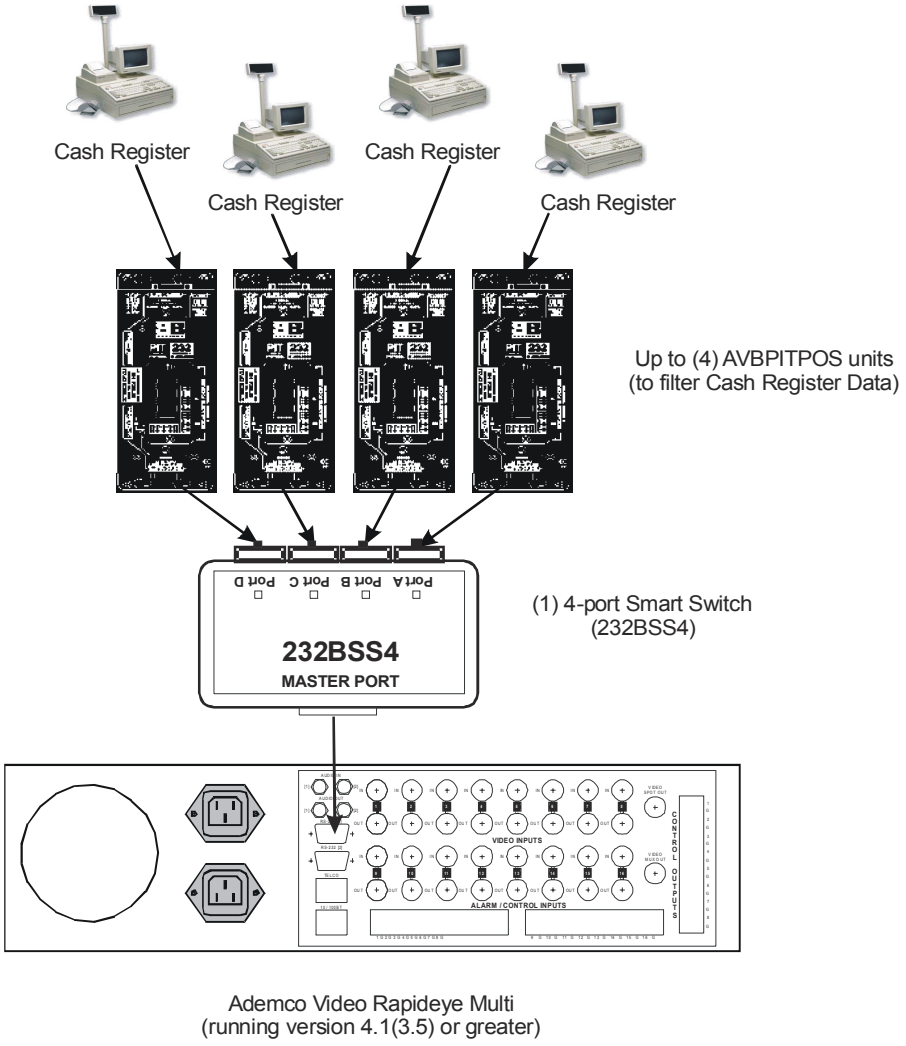


Figure 8: Basic Configuration – B&B Smart Switch and 4 AVBPITPOS

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